

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/364,794 07/30/99 BERGE

J 7480-PA1CP2

PM82/1101

EXAMINER

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SHAPTR01

ART UNIT

PAPER NUMBER

3651

DATE MAILED:

11/01/01

*M***Please find below and/or attached an Office communication concerning this application or proceeding.****Commissioner of Patents and Trademarks**

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/364,794	BERGE ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Jeffrey A. Shapiro	3651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 10/9/01.
- 2a) This action is FINAL.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,11,39,59,65,72,97,102,105,126,128,138,145,151 and 164 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,11,39,59,65,72,97,102,105,126,128,138,145,151 and 164 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ .
- 4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_ .
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_ .

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 11, 39 and 128, as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Benny et al. Benny et al discloses the apparatus for conveying ice as follows.

As described in Claim 1;

- 1.) a hollow elongated ice conduit (38, 46, 88, 94, 96 and 98) connecting said source (22) of ice and said remote location (26) and providing ice communication therebetween;
- 2.) a receptor (26 or 106) at said remote location for receiving said ice (note tables (element 26) could be reasonably construed as receptors or air lock (106) could be construed as a receptor in that it builds up "ice" particles behind it until the barometric pressure is overcome by the weight of the built-up mass of ice particles);
- 3.) a vacuum pump (32) in fluid communication through a vacuum line with said receptor for withdrawing air from said conduit and creating a vacuum comprising said negative air pressure *substantially throughout*

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said conduit, said negative air pressure causing said ice to traverse said conduit from said source into said receptor;

As described in Claim 11;

4.) said receptor at said remote location comprises an accumulator (note that tables (26) accumulate or said air lock accumulates as discussed previously) having therein an openable gate (106) for release therefrom at said remote location of accumulated pieces of ice conveyed thereto from said source (note that flexible end of 106 acts as a gate);

As described in Claim 39;

5.) said vacuum line (150) connecting in fluid communication into said hollow conduit at a first point of connection (54) upstream of a second point of connection (94) of said hollow conduit into said receptor (26), and spaced apart from said second point of connection by an interval not greater than a distance that said ice pieces can traverse under momentum imparted to them by their prior conveyance by said negative air pressure (note the distance between the connection point of (88) with (94) from the connection point of (54) with (88), such that diversion of at least a portion of conveying force of said negative air pressure at said first point of connection does not prevent said ice pieces from continuing to traverse entirely through said hollow conduit into said receptor;

As described in Claim 126;

10.) a process of conveying ice comprising as follows;

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- a.) providing a hollow elongated ice conduit connecting said source of ice and said remote location and providing ice communication therebetween, a receptor at said remote location for receiving said ice, and a vacuum pump in fluid communication through a vacuum line with said receptor for withdrawing air from said conduit and creating a vacuum comprising said negative air pressure in said conduit, said negative air pressure causing said ice to traverse said conduit from said source into said receptor;
- b.) withdrawing air from said receptor and conduit and creating a vacuum comprising said negative air pressure in said receptor and conduit;
- c.) causing said ice to traverse said conduit from said source into said receptor under the influence of said negative air pressure;

(See Claim 1, above)

The term "ice conduit" of Claims 1 and 126 is considered to be positively recited.

Regarding the nature of "ice particles", Applicants are referred to Berge et al (US 5,660,506) which indicates in the abstract that frozen food such as chopped vegetables or diced meat, ice cubes or crushed ice are functional equivalents of each other.

***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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Claims 59, 72, 97, 102, 105, 128, 138, 145 and 164, as understood, are rejected under 35 USC 103(a) as being unpatentable over Benny et al in view of Wade (US 3,877,241). Benny et al discloses the ice conveying apparatus as discussed above. Benny et al does not expressly disclose the subject matter described in Claims 59, 72, 97, 102, 105, 128, 138, 145 and 164.

As described in Claim 59;

6.) said receptor (12) being disposed adjacent to an inlet of a subsequent conduit (17) leading to a subsequent accumulator at another remote location (13), and said pieces of ice released from said receptor being deposited into said inlet for conveyance through said subsequent conduit to said subsequent accumulator at said another remote location (note that whether said ice pieces are deposited into said receptor (12) and then receptor (13) through conduit (17) directly, or said ice pieces are deposited into said receptor (12), said receptor then depositing them into the next receptor (13), these two schemes are considered to be equivalent);

As described in Claims 72 and 145;

7.) sensor means (36, 37, and 38) for detecting the presence or absence of ice in said receptor;

As described in Claim 97;

1.) cleaner introduction means for introducing a liquid cleaner into said ice conduit and conveying said liquid cleaner through said ice conduit under said negative air pressure, whereby passage of said cleaner through said ice conduit cleans contaminants from the interior of said conduit, and upon discharge of said cleaner at an outlet of said conduit, removes from said conduit said contaminants entrained in said cleaner (note that it would be expedient for one of ordinary skill in the art to introduce a cleaning fluid into the device of Wade by means of the vacuum system employed by Wade, so as to clean out ice debris or ice sawdust built up over time—see also Benny et al, summary of invention, at col. 1, lines 44-62);

As described in Claim 102;

8.) said receptor (12) at said remote location comprises an air lock device (27) which is connected to said ice conduit (17) or (26) on an upstream side and which has an inlet for pressurized air from a source thereof on a downstream side and another conduit (20) extending from said downstream side for passage of said pressurized air, such that ice entering said air lock device from said ice conduit passes through said air lock device and is propelled through said another conduit at high velocity by said pressurized air;

As described in Claim 105;

9.) *that portion of said another conduit downstream of said air lock comprises flexible tubing with an outlet at an end distal from said air lock*

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*device and further comprising* directing means for manual, mechanical, pneumatic or electrical positioning of said outlet end of said flexible tubing (note that (27) is moved by solenoid (29)); (Note that flexible tubing is considered to be functionally equivalent to regular tubing in that the fluid flow with entrained material will still flow through such tubing. In addition, the apparatus of Benny et al uses flexible tubing in that system.)

As described in Claim 128;

- 11.) a process where said receptor comprises an accumulator, said process further comprising;
  - a.) providing an openable gate in said accumulator at said remote location;
  - b.) causing pieces of ice conveyed into said accumulator through said conduit by said vacuum to come to rest bearing upon said gate, said gate being biased against said opening;
  - c.) releasing of accumulated pieces of ice conveyed from said source from said accumulator at said remote location by counteracting or eliminating such biasing;

As described in Claim 138;

- 12.) a process as in Claim 126, further described as follows;
  - a.) connecting said vacuum line in fluid communication into said ice conduit at a first point of connection upstream of a second point of connection of said ice conduit into said ice receptor, and spaced

apart from said second point of connection by an interval not greater than a distance that said ice pieces can traverse under momentum imparted to them by their prior conveyance through said conduit by said negative air pressure;

b.) conveying said ice pieces under that amount of force of said negative air pressure at said first point of connection sufficient to cause said ice pieces to continue to traverse entirely through said first conduit and into said receptor without diversion of any ice pieces into said vacuum line;

As described in Claim 164;

14.) a plurality of receptors (12, 13, and 14) or said ice sources or said ice sources and said conduit having an intermediate division point from which a plurality of branch conduits extend (17, 20), each branch conduit leading directly or through at least one intermediate further division point from which a subsequent plurality of further branch conduits extend, to an ice communication connection with a respective one of said plurality of receptors or ice sources (note that there are intermediate points, such as where (20) branches off into (13) as an example of one of a number of branch points);

Both Benny et al and Wade et al are analogous art because they concern the movement of ice particles entrained in air from a source to an accumulation point.

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At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have added the multiple inlet/outlet and multiple sources and receptors/accumulators.

The suggestion/motivation for doing so would have been to transport ice particles from disparate remote ice-making sources to disparate remote storage locations. See col. 1, lines 5-7.

Therefore, it would have been obvious to combine Benny et al and Pink et al to obtain the invention as specified in Claims 59, 72, 97, 102, 105, 128, 138, 145 and 164.

Claims 65 and 151, as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Benny et al in view of Pink et al. Benny et al describes the ice conveying apparatus as described above. Benny et al does not expressly disclose the unbridging means described in Claims 65, 97 and 151.

Pink et al discloses the ice unbridging means as follows.

As described in Claim 65;

1.) a collector (42) into which ice pieces delivered from said source of ice are received, said collector having a first opening (23) into said first conduit, and further comprising unbridging means (35, 36, and 37) associated with said collector for presenting said released ice pieces individually and unbridged to said first opening, whereby said ice pieces pass through said first opening into said first conduit;

As described in Claim 151;

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2.) receiving ice pieces delivered from said source of ice in at least partially bridged condition, and unbridging said ice pieces prior to delivering said ice piece into said ice conduit;

Both Benny et al and Pink et al are analogous as both are examples of ice conveying apparatus'.

It would have been obvious at the time of the invention for one of ordinary skill in the art to have added the unbridging means of Pink et al to the receptor of Benny et al.

The motivation/suggestion would have been to encourage the ice to gravitate from the discharge port to another subsequent location and to maintain the ice particles at a certain size. See lines 12-18 of column 3.

Therefore, it would have been obvious to have combined Benny et al and Pink et al in order to obtain the invention as described in Claims 65 and 151.

#### ***Response to Arguments***

4. Applicant's arguments with respect to Claims 1, 11, 39, 59, 65, 72, 97, 102, 105, 126, 128, 138, 145, 151 and 164, filed 10/9/01, have been considered but are moot in view of the new ground(s) of rejection. Although the prior final action has been rescinded, the current action is made final due to the filing of amendment "D", which necessitates making the current new action final.

#### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. White et al, Arendt et al, Berg et al, DeMarco, Maier-Laxhuber et

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al, Broadbent, Lancaster et al, Davis et al, Schroeder and Berge et al (US 6,279,329

B1) are cited as examples of ice making and transport systems.

6. This rejection is made in response to both the Request for Reconsideration filed 10/9/01 and Amendment "D", filed 4/16/01. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

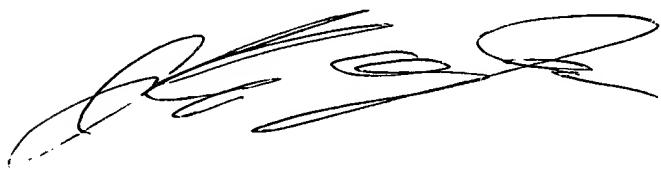
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey A. Shapiro whose telephone number is (703)308-3423. The examiner can normally be reached on 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher P. Ellis can be reached on (703)308-2560. The fax phone numbers for the organization where this application or proceeding is assigned are

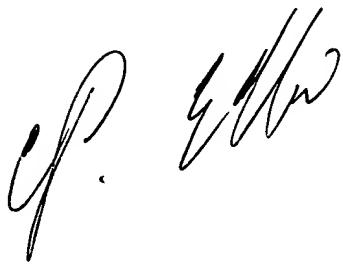
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(703)308-0552 for regular communications and (703)308-0552 for After Final  
communications.

Any inquiry of a general nature or relating to the status of this application or  
proceeding should be directed to the receptionist whose telephone number is (703)308-  
1113.



Jeffrey A. Shapiro  
Patent Examiner,  
Art Unit 3651



CHRISTOPHER P. ELLIS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600

October 30, 2001